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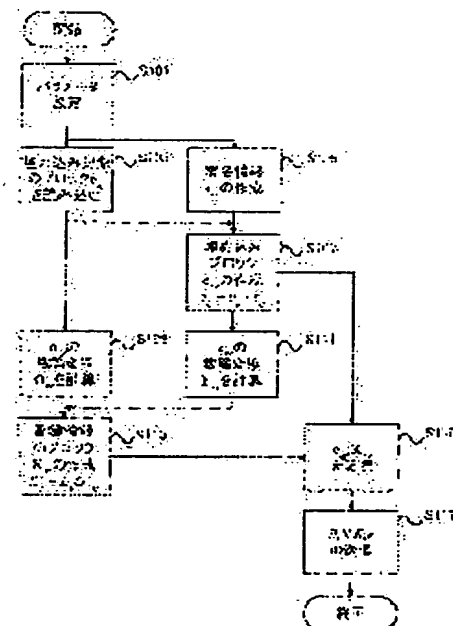
(72)Inventor : AOKI TADASHI  
TAMORI HIDEAKI  
YAMAMOTO TSUYOSHI

(54) FALSIFICATION POSITION DETECTION METHOD, FALSIFICATION POSITION DETECTION PROGRAM, AND RECORD MEDIUM RECORDING THE PROGRAM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a falsification position detection method using a weak electronic watermark due to number theoretical transform, and to provide a falsification correction method.

SOLUTION: A processing section obtains main key information P for the number theoretical transform and a root  $\alpha$  of an order N using the orders N and the P as a modulus based on P (S101). The processing section inputs each pixel value  $o_{ij}$  of an original image block  $oxy$  (S103). The processing section creates signature information  $sxy$  for embedding in each pixel value  $oxy$  based on the P (S105). The processing section obtains an embedded image block  $exy$  where the signature information is embedded by obtaining the difference between  $oxy$  and  $sxy$  (S107). The processing section obtains a number theoretical transform coefficient  $Exy$  of  $exy$  and that  $Oxy$  of the  $oxy$  (S109, S111). The processing section generates a block  $Kxy$  of subkey information corresponding to each block (S113). The processing section processes each step to the original pixel block  $oxy$ , obtains  $exy$  and  $Ksy$  for storing at a storage section (S115), and transmits  $exy$ , P, N, and  $Kxy$  (S117).



## LEGAL STATUS

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